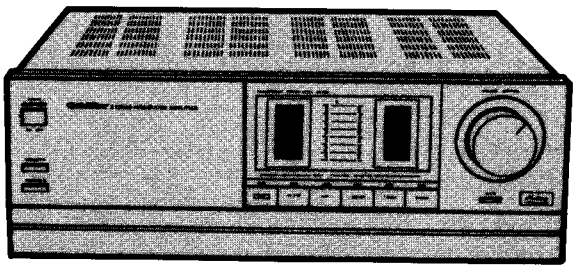
GoldStar

STEREO INTEGRATED AMPLIFIER

SERVICE MANUAL

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTION" IN THIS MANUAL.



MODEL: GSA-9320

GoldStar

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SAFETY PRECAUTION

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual, electrical components having such features are identified by a ⚠ in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

SPECIFICATIONS

1. Output Power ..... 110 W + 110 W
   (8 Ω Load, 0.3% Distrotion, 63 Hz-12.5 kHz, Both Channel Driven)
2. Distortion (Nominal Output Power, −3 dB, 1 kHz) 0.005%
3. Frequency Response (20 Hz-20 kHz) ..... ±0.8 dB
4. Signal-to-noise Ratio (2.2 kΩ, IHF-A) ..... Phono: 83 dB
   (22 kΩ/250 pF, IHF-A) ..... Tuner, CD/VDP, Aux, TV/VTR, Tape Mon.: 100 dB
5. Cross Talk (Input Shorted) ..... 250 Hz: 6 dB, 1 kHz: 60 dB, 10 kHz: 45 dB
6. Tone Control ..... Bass 100 Hz: 10 dB
   Treble 10 kHz: 10 dB
7. Input Sensitivity (100 W, 1 kHz, 8 Ω) ..... Phono: 2.5 mV
   Tuner, CD/VDP, Aux, TV/VTR, Tape Mon: 150 mV
   Mic: 1.5 mV
8. Input Impedance (Volume Max., −6 dB position) ..... Phono, Tape, Aux: 47 kΩ
9. Loudness (Volume Max., −30 dB position) ..... 100 Hz: +6 dB, 10 kHz: +3 dB
10. Power Requirement ..... AC 220 V, 50 Hz
11. Power Consumption ..... 630 W
12. Dimension (Width × Height × Depth) ..... 430 × 145 × 360 (mm)
13. Weight ..... 12 Kg

NOTE: Specifications for this model are subject to change without prior notice.

NAMES OF CONTROL PARTS

1. POWER Switch
2. SPEAKER A Button
3. SPEAKER B Button
4. POWER LEVEL METER
5. INPUT FUNCTION SELECTOR
6. VOLUME CONTROL
7. MUTE Button
8. MIC LEVEL Control
9. MIC Jack
10. SOURCE LEVEL Control
11. LOUDNESS Button
12. MODE Button
13. HIGH FILTER Button
14. SUBSONIC FILTER Button
15. BALANCE Control
16. TREBLE Control
17. TONE Button
18. BASS Control
19. METER RANGE Button
20. PHONES Jack
21. Jacks
22. GND Pin
23. SPEAKER Terminals
24. AC OUTLET
25. Power Cord

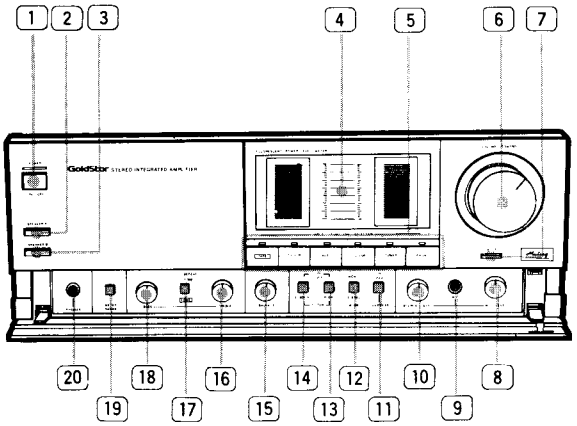


Figure 1 FRONT VIEW

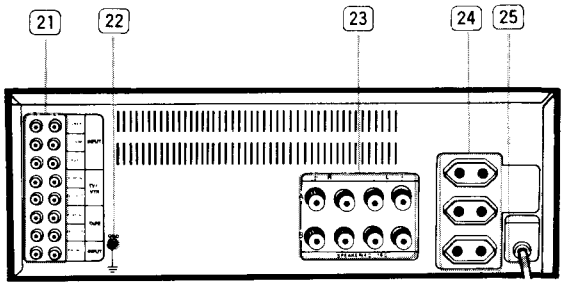
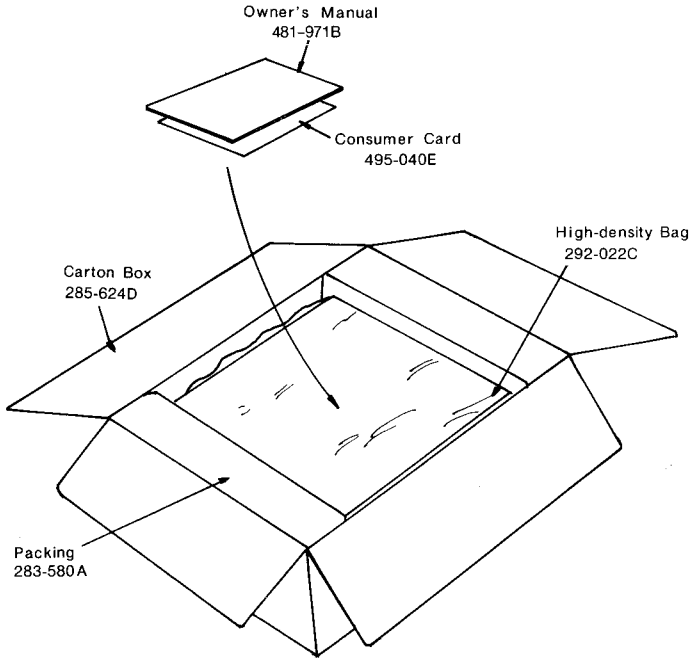


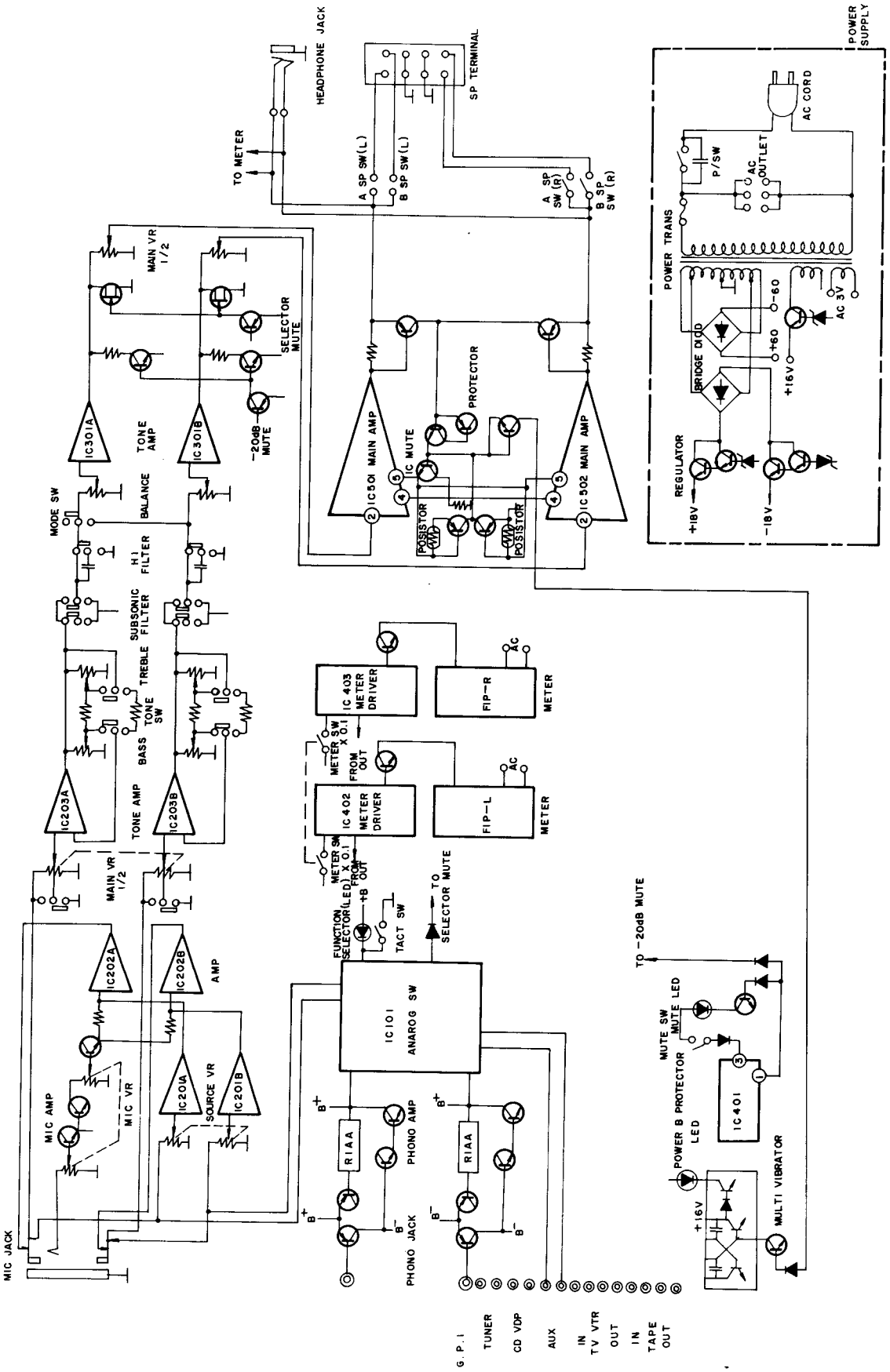
Figure 2 BACK VIEW

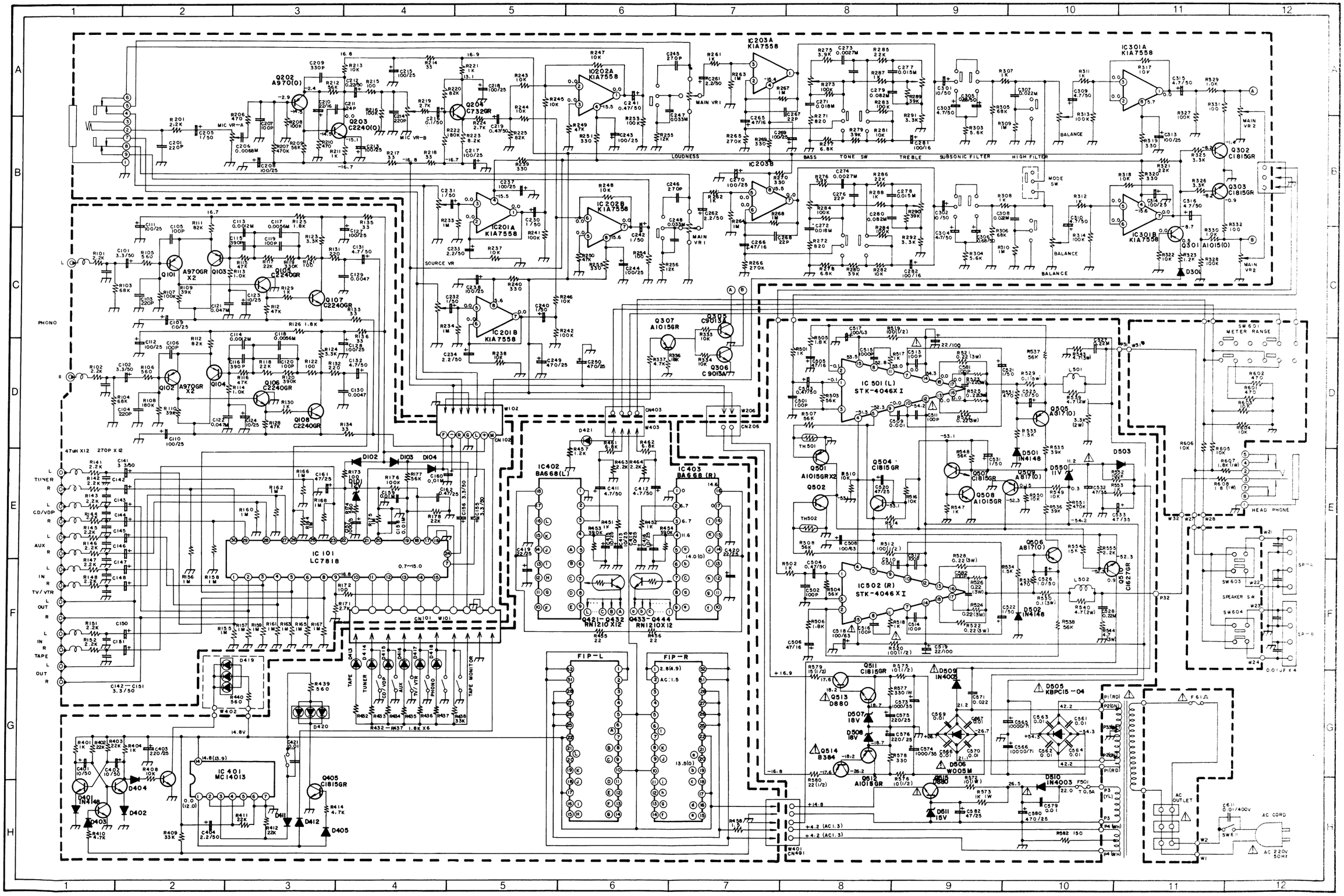
NOTE: For a complete description of the operation of this unit, please refer to the owner's manual.

PACKING OF THE SET

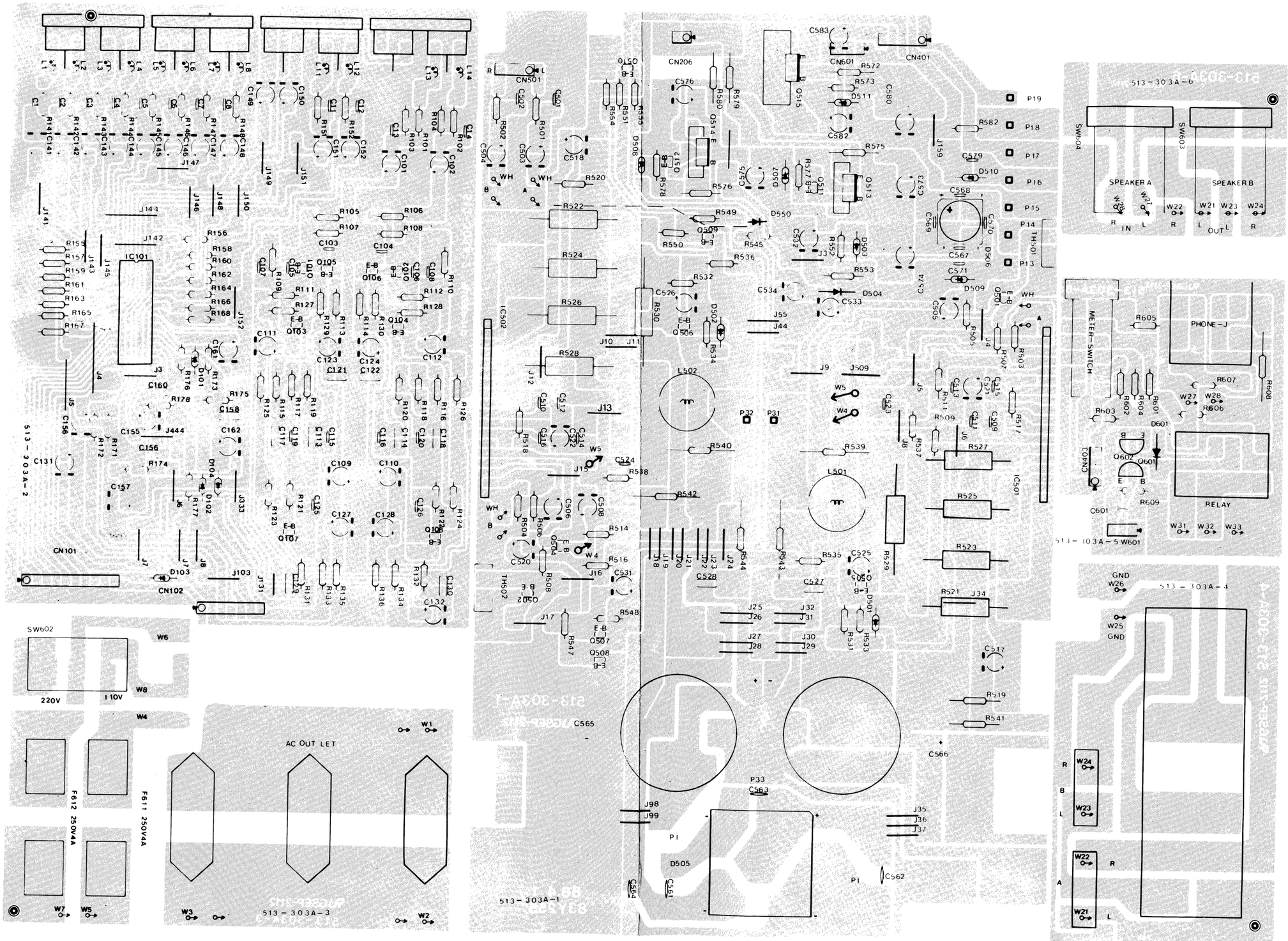


BLOCK DIAGRAM

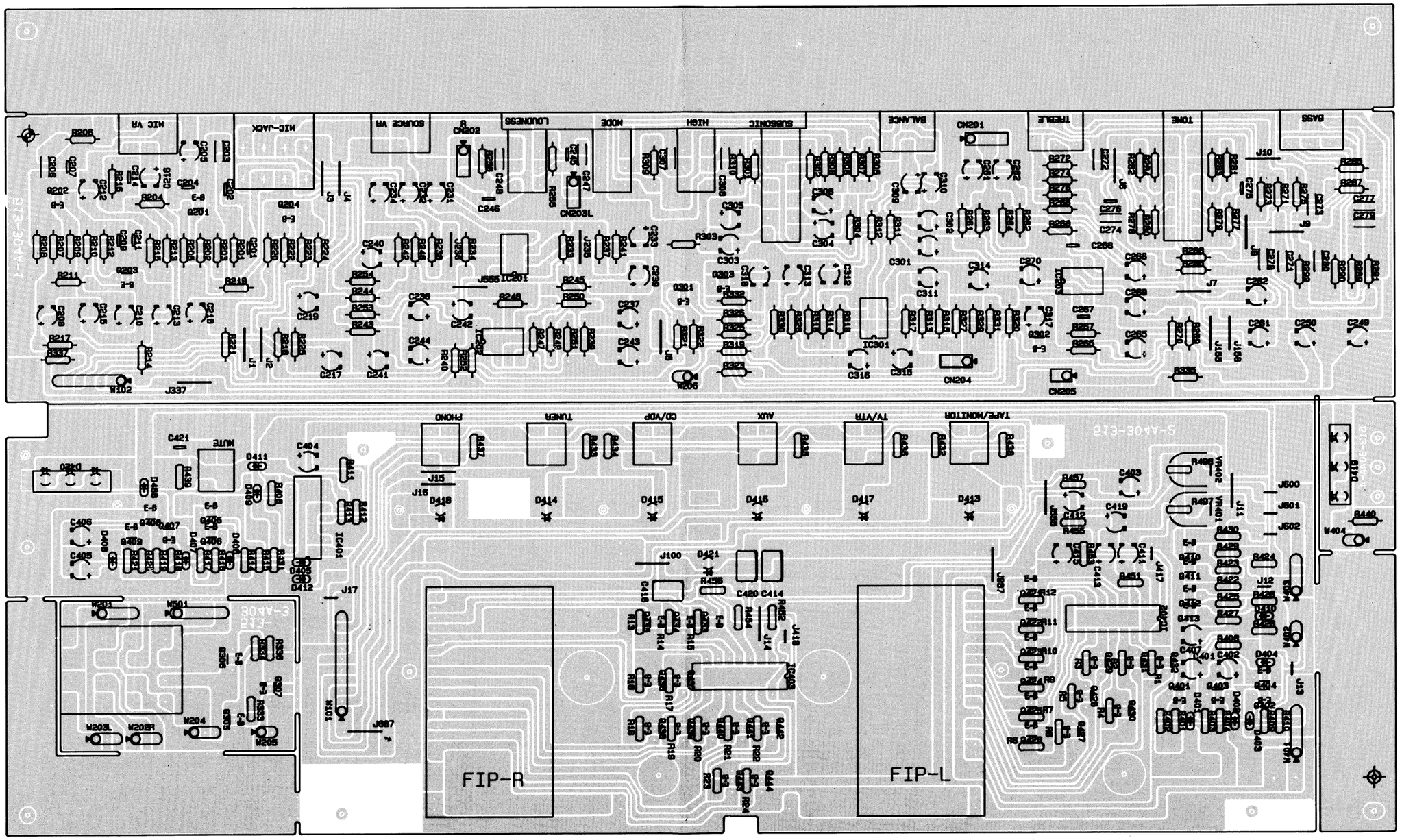



Q202 A970(O)
Q203 C2240(O)
Q204 C732GR
IC201A KIA7558
IC202A KIA7558
IC202B KIA7558
IC201B KIA7558
IC203A KIA7558
IC203B
IC301A KIA7558
IC301B KIA7558
Q301 A1015(O)
Q302 C1815GR
Q303 C1815GR
Q307 A1015GR
Q306 C9013
IC 501 (L) STK-4046X I
IC 502 (R) STK-4046X I
Q501 A1015GRX2
Q502
Q504 C1815GR
Q505 A817(O)
Q506 A817(O)
Q507 C1815GR
Q508 A1015GR
Q509 A817(O)
Q510 C1627GR
Q511 C1815GR
Q512 A1015GR
Q513 D880
Q514 B384
IC 101 LC7818
IC 401 MC14013
IC402 BA668(L)
IC403 BA668(R)
Q421—Q432 RN1210 X12
Q433—Q444 RN1210X12
D501 IN4148
D502 IN4148
D503
D505 KBPC15-04
D506 W005M
D507 18V
D508 18V
D509 IN4003
D510 IN4003
D511 15V
D512 15V
D301
D401 IN4148
D402
D403
D404
D405
D411
D412
D419
D420
D421
D501 IN4148
D502 IN4148
D503
D509 IN4003
D510 IN4003
D511 15V
D512 15V
PHONO
TUNER
CD/VDP
AUX
TV/VTR
TAPE
TAPE MONITOR
MIC VR-A
MIC VR-B
MAIN VR1
MAIN VR2
SOURCE VR
LOUDNESS
BASS
TONE SW
TREBLE
SUBSONIC FILTER
HIGH FILTER
MODE SW
BALANCE
METER RANGE
HEAD PHONE
SPEAKER SW
SW601
SW603
SW604
SW611
AC OUTLET
AC CORD
AC 220V 50Hz
F61Ω
W102
W206
W403
W402
W401
CN102
CN403
CN206
CN401
CN101
W101
FIP-L
FIP-R
47uH X12
270P X 12
R432—R437 1.8K X6
C142—C151 3.3/50
0.01UF X4

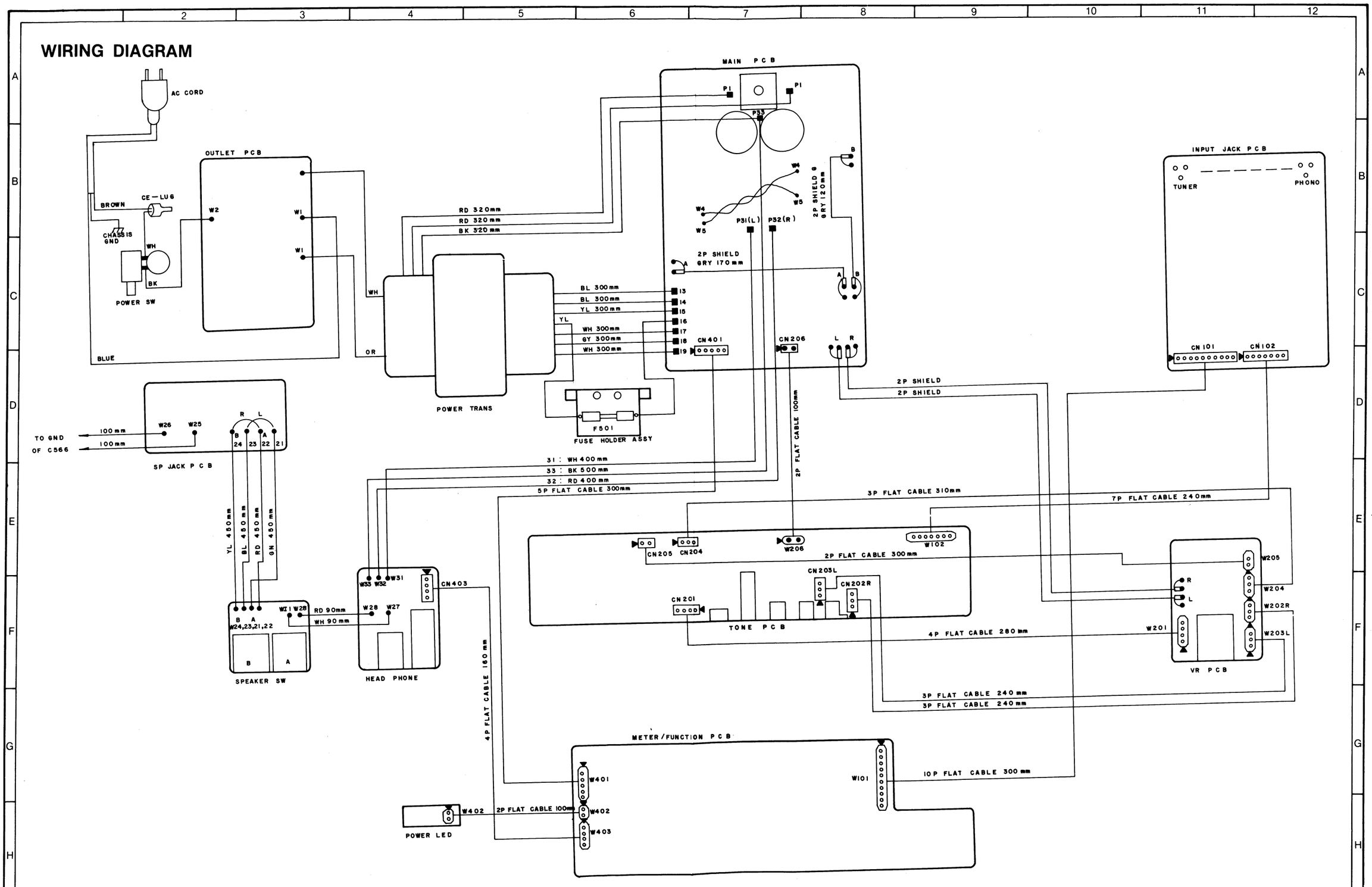
- **MAIN P.C. BOARD**



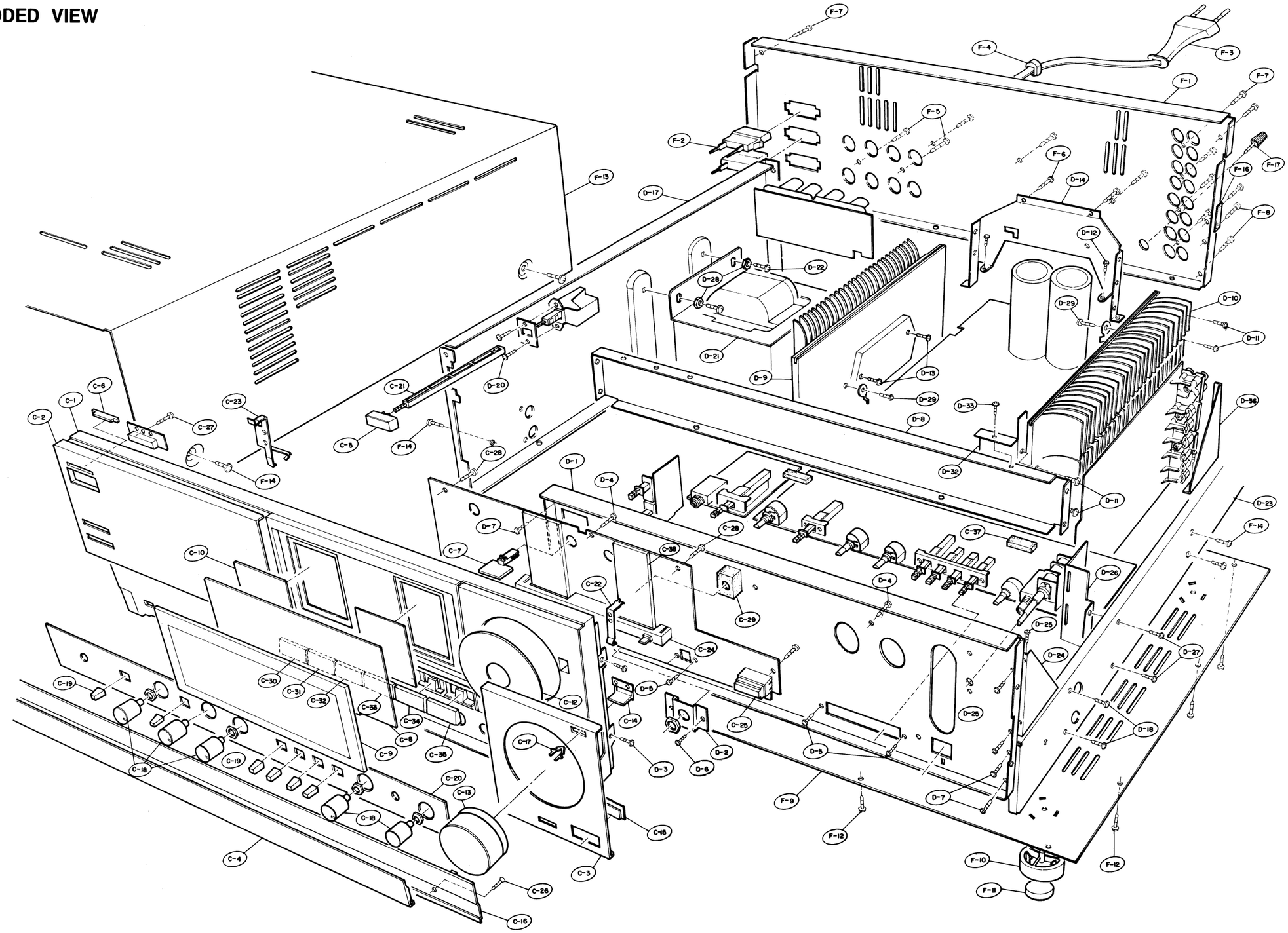
• CONTROL & DISPLAY P.C. BOARD



WIRING DIAGRAM

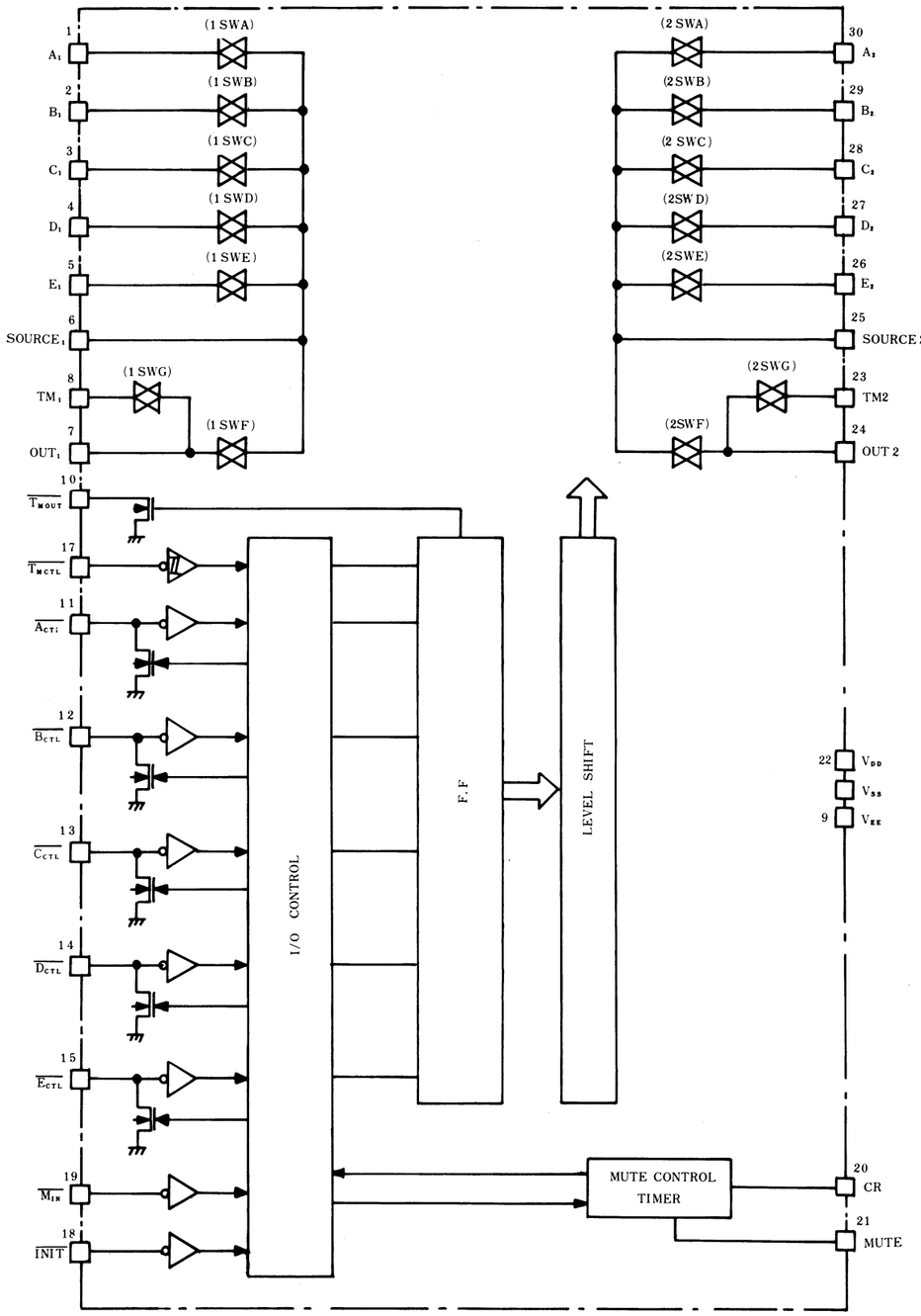


EXPLODED VIEW

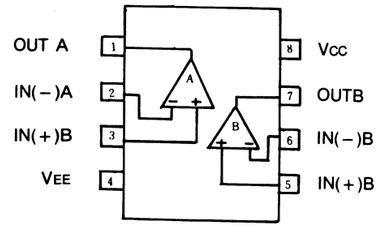


IC EQUIVALENT CIRCUITS

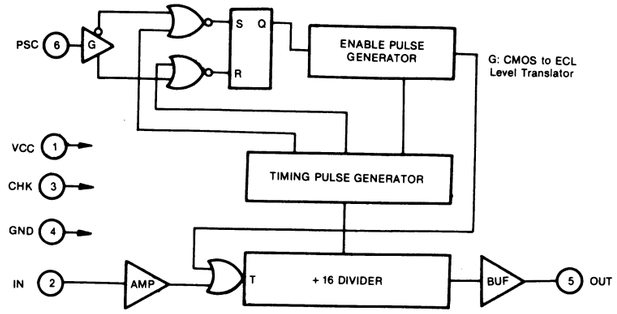
IC101 LC7818



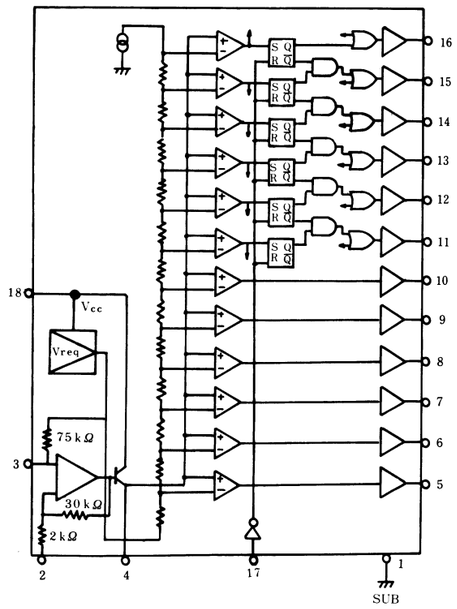
IC201～203, 301 KIA75558P
(DUAL OP AMP)



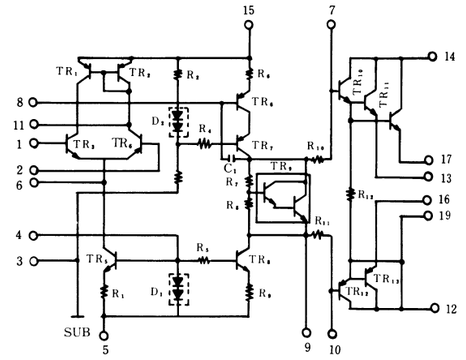
IC401 MC14013 BCP
(D FLIP FLOP)



IC402, 403 BA668A
(DIGITRON DRIVE)



IC501, 502 STK4046XI



REPLACEMENT PARTS LIST

NOTE: Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO.	PART NO.	DESCRIPTION
		INTEGRATED CIRCUITS
IC101	668-661C	LC7818
IC201-203	668-051F	KIA7558P, Dual Op Amp.
IC301	668-051F	KIA75558P, Dual Op Amp.
IC401	668-057A	MC14013BCP, D Flip Flop
IC402,403	668-088B	BA668A, Digitron Drive
IC501,502 ⚠	668-636A	STK4046-XI, H-Power
		TRANSISTORS
Q101-104	665-818A	KTA970-GR, PNP
Q105-108	665-817A	KTC2240-GR, NPN
Q202	665-818A	KTA970-GR, PNP
Q203	665-817A	KTC2240-GR, NPN
Q204	665-816A	KTC732TM-GR, NPN
Q301	665T813B	KTA1015-Y, PNP
Q302,303	665T812B	KTC1815-Y, NPN
Q305,306	665-703B	KTC9013A-H, NPN
Q307	665T813B	KTA1015-Y, PNP
Q401-405	665T812B	KTC1815-Y, NPN
Q421-444	665-716D	RN1210
Q501,502	665T813B	KTA1015-Y, PNP
Q504	665T812B	KTC1815-Y, NPN
Q505,506	665-833B	KTA817A-Y, PNP
Q508	665T813B	KTA1015-Y, PNP
Q509	665-833B	KTA817A-Y, PNP
Q510	665-832B	KTC1627A-Y, NPN
Q511	665T812B	KTC1815-Y, NPN
Q512	665T813B	KTA1015-Y, PNP
Q513 ⚠	664-601A	KTD880-O, NPN
Q514 ⚠	664-602A	KTB834-O, NPN
Q515 ⚠	664-601A	KTD880-O, NPN
Q807	665T812B	KTC1815-Y, NPN
		DIODES
D101	654-724B	Zener, DZ12B
D102-104	651T003A	Switch, DS4148
D401-405	651T031A	Switch, 1SS132
D411,412	651T031A	Switch, 1SS132
D413	653-645A	LED, SLB15VW3, Red
D414-418	653-645B	LED, SLB15MW3, Green
D419	653-647A	LED, LD701VR, Red
D420	653-647B	LED, SLF-406B, Yellow
D421	653-636D	LED, SLR54GC3, Green
D501-503	651T003A	Switch, DS4148
D505 ⚠	652-602D	Rectifier, KBPC15-04
D506 ⚠	652-013A	Rectifier, W005H
D507,508	654-725A	Zener, DZW18
D509,510 ⚠	652-005E	Rectifier, DS4003
D511	654-724D	Zener, DZ15B
D550	654-724A	Zener, DZ11B

REF. NO.	PART NO.	DESCRIPTION
		COILS
L501	636-603C	Inductor Fixed, 3μH
L502	636-603C	Inductor Fixed, 3μH
		VARIABLE RESISTORS
	611-650C	Main, 100 × 4
	611-631E	Bass, 100KC
	611-631E	Treble, 100KC
	611-650D	Balance, 100KMN
	611-650G	Source, 250KB
	611-650F	Mic, 100KB
		SWITCHES
SW601	554-624T	Meter, SPUN 12
SW603,604	554-620F	Speaker, SDS3P
SW611 ⚠	554-620G	Power, SCZ1P-A
	554-624T	Tone, SPUN12
	558-908A	Function, KH10902
	558-908A	Mute, KH10902
	554-624S	Push, SPUN44
		MISCELLANEOUS
F611 ⚠	585-517A	Fuse, 250V 4A
F612 ⚠	585-517A	Fuse, 250V 4A
⚠	585-505A	Fuse, 250V 500mV
	572-134A	Jack, Headphone
	576-002E	Jack, Block
	655-005A	Posistor, PTH487A01B222TS
	659-016F	Digitron, FIP26AW22YS
		PCB ASSEMBLIES
	511-303B	PCB Assembly, Main
	511-304B	PCB Assembly, Control and Display
		CABINET PARTS
C-1	258-016A	Panel, Front
C-2	246-072C	Decoration (A), Panel
C-3	246-073A	Decoration (B), Panel
C-4	246-074A	Decoration (C), Door
C-5	273-058A	Knob, Power
C-6	236-059A	Window, Power LED
C-7	273-061A	Knob, Speaker Switch
C-8	256-031C	Plate, Level Meter
C-9	236-058A	Window, Level Meter
C-10	231-560N	Sheet, Display

REF. NO.	PART NO.	DESCRIPTION
C-12	256-032C	Plate, Volume Knob
C-13	273-056A	Knob, Volume
C-14	273-062A	Knob, Mute Switch
C-15	236-057A	Window, Mute LED
C-16	226-002A	Door, Control Switch
C-17	324-016A	Holder, Door
C-18	273-098A	Knob, Control Switch
C-19	273-060A	Knob, Push
C-20	256-034A	Plate Control Switch
C-21	324-019A	Holder, Bar
C-22	442-008A	Spring Earth (A)
C-23	442-020A	Spring Earth (B)
C-24	324-015A	Holder, Function LED
C-25	324-018A	Holder, Mute LED
C-26	TCQ1830I	Screw
C-27	353-025E	Screw, Special 3 × 6
C-28	353-025G	Screw, Special 3 × 10
C-29	447-012A	Cushion, Digitron
C-30	273-059S	Knob, Function (Tape)
C-31	273-059B	Knob, Function (TV/VTR)
C-32	273-059C	Knob, Function (Aux)
C-33	273-059D	Knob, Function (CD/VDP)
C-34	273-059E	Knob, Function (Tuner)
C-35	273-059F	Knob, Function (Phono)
C-37	447-010G	Cushion
C-38	256-543A	Plate, Display
D-1	313-093A	Chassis, Front
D-2	321-004A	Bracket, Phone
D-3	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-4	353-025G	Screw, Special 3 × 10
D-5	MPC1830J	Screw, MPC + 3 × 6
D-6	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-7	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-8	315-006A	Frame, Main
D-9	255-093A	Heatsink (Left)
D-10	255-094A	Heatsink (Right)

REF. NO.	PART NO.	DESCRIPTION
D-11	TRQ1839J	Screw, TRQ2 + 3 × 10A
D-12	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-13	TRQ1846J	Screw, TRQ2 + 3 × 20A
D-14	321-002A	Bracket, Heatsink
D-17	315-007A	Frame (L)
D-18	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-20	MPC1830J	Screw, MPC + 3 × 6
D-21 ⚠	641-745C	Trans, Power 220V
D-22	TRQ2236J	Screw, Tapping TRQ2 + 4 × 8A
D-23	315-008A	Frame (R)
D-24	321-889A	Bracket (A), Frame
D-25	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-26	321-003A	Bracket, Jack PCB
D-27	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-28	WSB2200O	Washer, Spring
D-29	TRQ1836J	Screw, TRQ2 + 3 × 8A
D-30	321-889B	Bracket (B), Frame
D-31	321-115A	Bracket, Heatsink (L)
D-33	TRQ1836J	Screw, TRQ2 + 3 × 8A
F-1	258-020D	Panel, Back
F-2 ⚠	565-004B	AC Outlet
F-3 ⚠	681-015A	Cord, Power
F-4	324-348E	Holder Cord
F-5	353-025B	Screw, Special 3 × 8
F-6	TRQ1836I	Screw, TRQ2 + 3 × 8A
F-7	353-025B	Screw, Special 3 × 8
F-8	TRQ1836I	Screw, TRQ2 + 3 × 8A
F-9	256-030A	Plate, Bottom
F-10	265-001A	Foot
F-11	256-033A	Plate Rubber
F-12	TRQ1830J	Screw, TRQ2 + 3 × 6A
F-13	213-004A	Cabinet
F-14	353-633A	Screw, Special
F-16	447-010H	Cushion
F-17	353-055A	Screw, Special